

REMARKS

Claims 45-64, 66-73, 76-79, 82-84, and 86 are pending in the present application. The Office Action and cited references have been considered. Favorable reconsideration is respectfully requested.

Claims 45-47, 53, 55-56, 61, 63-64, 66, 72-73, 76-79, 82-84, and 86 were rejected under 35 U.S.C. § 102 (e) as being anticipated by Fatehi (U.S. Patent Number 6,600,583) in view of Barnsley (U.S. Patent No. 5,488,501). Claims 48-52, 54, 57-60, 62, and 67-71 were rejected under 35 U.S.C. § 103 as being unpatentable over Fatehi in view of Barnsley and Nir (U.S. Patent No. 6,160,653). This rejection is respectfully traversed.

Applicant has amended each of the independent claims 45, 46, 55, 66, 76, 82, and 86, to clarify that at least one of the optical addressing links is on at least one partially different path from the optical data link between the nodes or routers in the system. The exact language used to clarify this feature of the invention differs depending on the subject matter of the particular claim. However, in each independent claim, applicant's solution to the problem faced by the prior art, as discussed in the background section of applicant's specification on pages 1-3, uses a different physical path (or link) for the addressing signals than for the one for the data

signals as the signals travel between the nodes or routers in the system. Support for this amendment can be found in, for example, Fig. 2 of the present application, where the two paths (buses) 202 and 203 are shown, and in the corresponding explanation provided on page 11, line 22 through page 12, line 6, particular, page 12, lines 1-6.

In contract, according to the teachings of Fatehi, the addressing and data signals are always conveyed along the same physical path. For example, column 4, lines 1-15 states that

we utilize an "optical message tag" on the carrier wavelength which includes packet destination information associated with a group of packets which are carried on a wavelength. Optical tagging is described in U.S. Pat. No. 5,745,274, ..., which describes the use of a frequency tone as a sub-carrier for carrying message tags, [and] under certain conditions, one could modulate the message tags directly on the envelopes of the data carrying wavelengths without using sub-carrier tone frequencies.

The Office Action now acknowledges that Fatehi does not teach or suggest that the addressing links are at least partially different from the optical data links. The Office Action cites Barnsley as allegedly teaching this concept, and alleges that it would have been obvious to one of ordinary skill in the art to "allow the optical data link and the optical addressing link to be on at least partially physically

different paths," and that one of ordinary skill would have been motivated to do so "to allow the addressing data to be used to route the optical data signals through a switch (abstract of Barnsley)." Applicant respectfully disagrees.

First, Fatehi describes that "optical tags are formed by modulating individual optical carriers (e.g. lasers) with a unique identifier signal (i.e. frequency tone) that can be readily read, modified or written. While this patent describes the use of a frequency tone as a subcarrier for carrying message tags, under certain conditions, one could modulate the message tags directly on the envelopes of the data carrying wavelengths without using subcarrier tone frequencies." (Col. 4 lines 7-15). Since Fatehi states very clearly that optical tags are formed by modulating optical carriers with a unique identifier signal, there is no reason for a person ordinarily skilled in the art to envision the opposite, i.e. that the data signals and addressing signals, the tags, should not be modulated in order to allow conveying them along different routes. Thus, if at all, a combination of Fatehi with a reference that teaches the use of a subcarrier for carrying the control data such as Barnsley, can only be construed as teaching away from the present invention.

Moreover, Fatehi states the following:

In accordance with the present invention, optical tagging is associated with a group of packets and used for signaling between routers for controlling the routing of that group of packets over an optical network of Fig. 1. The superimposed "tag" can be removed in the optical domain. . . . More importantly, a new tag can be generated in the optical domain and applied in the intermediate router/cross-connects." (Col. 4, lines 18-27.)

Thus, the person ordinarily skilled in the art would have undoubtedly realized that the optical tags (the addressing signals) must be conveyed along the very same physical path as the data signals. As there is no a priori knowledge at which intermediate routers/cross connects along the path for conveying the addressing signals will the newly generated tag be applied, there is no way to determine a priori the two paths (each comprising a plurality of links) that could be used for conveying the data signals and the addressing signals, while complying with the two constraints: a) that at least one or more of the links in the two paths are different, and b) that both the old tag and the data reach the same intermediate router/cross-connect in a synchronized way to allow applying the newly generated tags.

Furthermore, Applicant respectfully submits that the combination which the Examiner proposed of Fatehi and Barnsley cannot be considered as one that teaches the claimed features that is missing from Fatehi alone, i.e. that the optical data

link and the optical addressing link are at least partially physically different paths between two nodes or routers in the system. Barnsley teaches conveying of optical data signals at a first wavelength and control signals at a second wavelength, while multiplexing the data and control signals onto the transmission line through which the signals then pass between the two nodes. Only once the signals reach the destination node 1 is a small portion of the control signals diverted to a band pass filter 14 via a splitter 7. (Col. 4, lines 18-21; Fig. 1) Thus, there is no indication, nor any implicit motivation provided by Barnsley, to transmit the data and control signals along different paths between two nodes or routers in the system.

For at least these reasons, Applicant respectfully submits that the independent claims 45, 46, 55, 66, 76, 82, and 86 are patentable over the prior art of record.

Further, Applicant respectfully submits that the dependent claims, depending from each of the independent claims respectfully, are patentable in and of themselves and as they depend from and include the recitations of the independent claims from which they depend for the reasons discussed above.

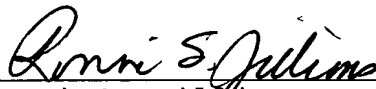
In view of the above amendments and remarks,
Applicant respectfully submits that the application is in
condition for allowance. Early notice to this effect is most
earnestly solicited.

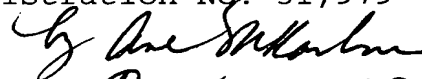
If the Examiner has any questions, or is inclined
not to withdraw the outstanding rejections, he is invited to
contact the undersigned at 202-628-5197, to advance
prosecution.

Respectfully submitted,

BROWDY AND NEIMARK, P.L.L.C.
Attorneys for Applicant

By


Ronni S. Jillions
Registration No. 31,979


Reg. No. 25,884

RSJ:cak
Telephone No.: (202) 628-5197
Facsimile No.: (202) 737-3528
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